

## First record of the genus *Schenkelia* Lessert 1927 (Araneae: Salticidae) from India

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**Abstract** — The jumping spider genus *Schenkelia* Lessert 1927 is recorded from India with the discovery of the species *Schenkelia aurantia* Kanesharatnam & Benjamin 2018. Digital images of the general habitus and male palp are provided. The distributional records of the species are mapped.

**Key words** — Arunachal Pradesh, Uttarakhand, Himalaya, *Schenkelia aurantia*, taxonomy

### Introduction

The family Salticidae with 6157 described species in 640 genera is the most speciose of spider families (World Spider Catalog 2019). Currently, 257 described species under 90 genera are known from India (World Spider Catalog 2019). The ‘Afrotropical-Oriental’ jumping spider genus *Schenkelia* Lessert 1927 was recently recorded from Sri Lanka (Kanesharatnam & Benjamin 2018) and is presently represented by five species (four from Africa and one from Sri Lanka) (World Spider Catalog 2019). The present paper deals with the record of the genus *Schenkelia* for the first time in India with the discovery of the species *Schenkelia aurantia* Kanesharatnam & Benjamin 2018.

### Material and Methods

Specimens were preserved in 70% ethanol and morphological examination was carried out under a Leica EZ4 HD stereomicroscope. Detailed micro-photographs were acquired using a Leica M205A stereomicroscope attached with Leica DFC500 HD camera enabled with a Leica Application Suite (LAS) version 3.8. The species was identified by comparing with the illustrations provided by Kanesharatnam & Benjamin (2018). Leg measurements are given as: total length (femur, patella, tibia, metatarsus, tarsus). Leg spine positions are as follows: prolateral, dorsal, retrolateral and ventral. All measurements are in millimeters. Specimen is deposited in the National Zoological Collections, Zoological Survey of India (NZC-ZSI), Kolkata. Abbreviations used in the text: AER - anterior eye row, ALE - anterior lateral eye, AME - anterior median eye, EFL - eye field length, PER - posterior eye row, PLE - posterior lateral eye, PME - posterior median eye.

### Taxonomy

*Schenkelia aurantia* Kanesharatnam & Benjamin 2018  
(Figs. 1–5)

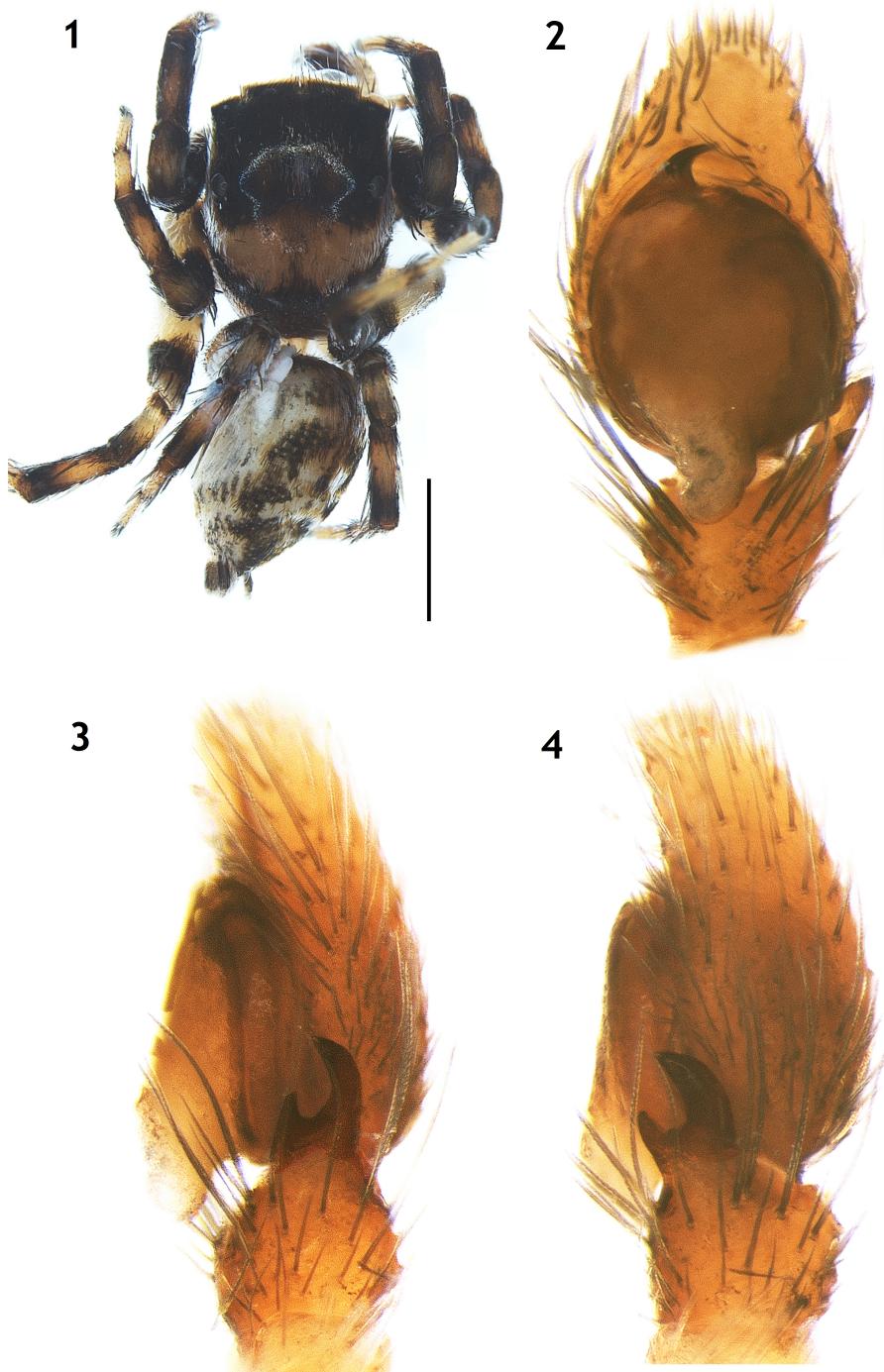
**Material examined.** 1 male (NZC-ZSI 6528/18) from Ramsing forest (28.63° N, 94.96° E, 1580 m), Mouling National Park, Dihang-Dibang Biosphere Reserve, Arunachal Pradesh, India, 26 October 2017, leg. Manpreet Singh; 1 male (in the personal collection of JC) from Wildlife Institute of India campus (30.2814° N, 77.9741° E, 605 m), Dehradun, Uttarakhand, India, 02 May 2018, leg. J. Caleb.

**Diagnosis.** The males can be easily recognized from other congeners by the thick, bifurcated RTA (Figs. 3, 4) and females can be distinguished by the presence of double chambered spermathecae (see figs. 10D & 11D in Kanesharatnam & Benjamin 2018).

**Description.** *Male.* Total length: 3.39; carapace: 1.78 long, 1.42 wide; abdomen: 1.61 long, 1.07 wide. Clypeus height 0.17. Eye measurements: AME 0.39, ALE 0.23, PME 0.07, PLE 0.17, AER 1.26, PER 1.28, EFL 0.85. Leg measurements: I 3.46 (1.09, 0.63, 0.76, 0.55, 0.43); II 3.24 (1.09, 0.60, 0.65, 0.48, 0.42); III 4.21 (1.46, 0.66, 0.77, 0.77, 0.55); IV 3.96 (1.24, 0.56, 0.78, 0.84, 0.54). Leg formula: 3412. Spination of legs: femora I–IV 0700; patellae I 1000, II 1000, III–IV 1010; tibiae I 3006, II 4024, III 3133, IV 3133; metatarsi I 1014, II 2014, III 4034, IV 5044; tarsi I–IV 0000.

Carapace blackish, covered with pale hairs; outer margins of carapace lined by broad yellowish region; another broad yellowish band starts from the lateral sides and runs behind the eye field (Fig. 1). Clypeal region covered with white hairs. Sternum oval, yellow-brown. Chelicerae reddish-brown, unidentate; labium and maxillae brown with paler margins. Legs yellow with dark annulations (Fig. 1). Abdomen oval, brown, with a pair of transverse yellowish bands in the anterior portion; mid-dorsal region lighter with faint chevron-shaped markings; spinnerets brown. Palps yellow-brown; embolus short, bulbous rounded with a posterior lobe; RTA strong and bifurcated (Figs. 2–4).

*Female.* See Kanesharatnam & Benjamin (2018) for description of the female.

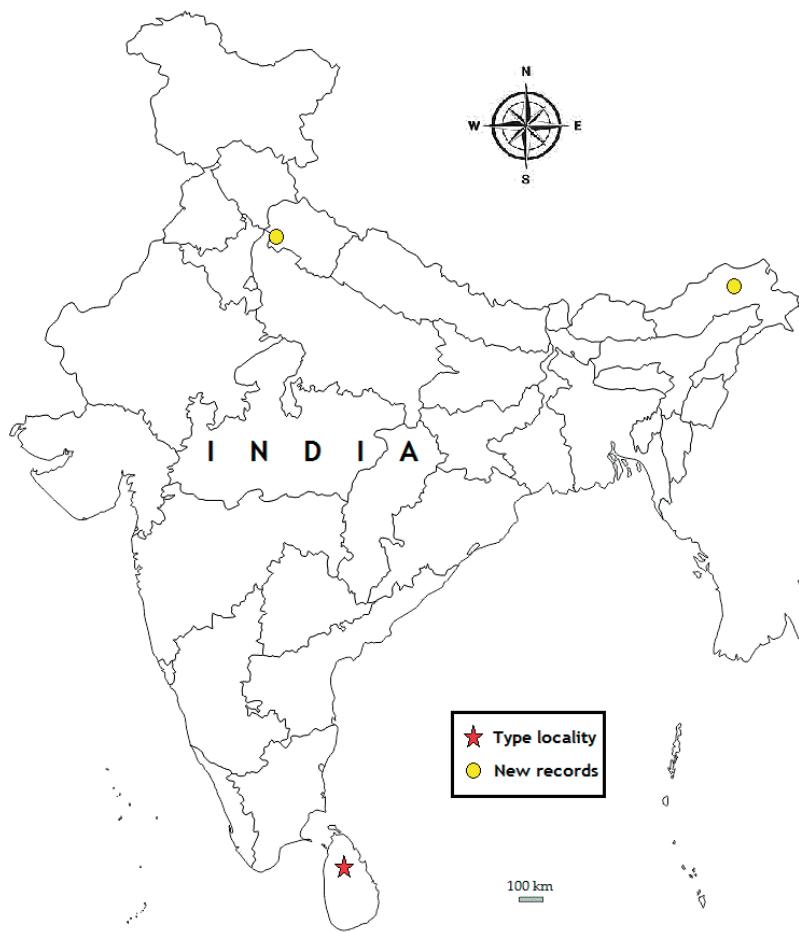


**Figs. 1–4.** *Schenkelia aurantia* Kanesharatnam & Benjamin 2018. 1, habitus, dorsal view; 2, left palp, ventral view; 3, ditto, retrolateral view; 4, ditto, dorsolateral view. Scale bars = 1 mm (1); 0.2 mm (2, 4).

**Distribution.** India (Arunachal Pradesh, Uttarakhand) and Sri Lanka. There is a significant gap between the Indian and Sri Lankan records which may be attributed to poorly studied/sampled regions across the Indian landscape. A similar pattern was observed for *Chryssilla volupe* (Karsch 1879) which was known only from its original record in Sri Lanka and another record from Bhutan (Zabka 1988) but with no records

throughout India, leaving a wide gap in the middle. However, recent studies detailed its distribution from several localities across India (Caleb & Mathai 2014; Caleb et al. 2018). Likewise, *S. aurantia* may also be found in the interim regions in India which can be encountered upon more sampling efforts.

**Comments.** The species was recently described from Mihintale Sanctuary, Sri Lanka (Kanesharatnam & Benja-



**Fig. 5.** Distributional records of *Schenkelia aurantia* Kanesharatnam & Benjamin 2018.

min 2018). The present records extend its distribution till the Himalayan regions in northern India (Fig. 5). Minor morphological variations are seen in the RTA of the Indian specimen. The shorter, ventral branch of the RTA appears to be slightly curved inwards and the base of the RTA appears to be slightly broader when compared with the Sri Lankan specimen (cf. Fig. 3 with fig. 9E in Kanesharatnam & Benjamin 2018). Additionally, the differences in the appearance of RTA depending on slight changes in angle of view are illustrated in Figs. 3, 4.

The species was placed in the African genus *Schenkelia* though there were some differences like the absence of a thin, long RTA and the presence of double-chambered spermathecae when compared with its type species, *S. modesta* Lessert 1927. However, the authors substantiated their decision that the placement was supported by molecular data (Kanesharatnam & Benjamin 2018).

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#### References

- Caleb, J. T. D. & Mathai, M. T. 2014. Description of some interesting jumping spiders (Araneae: Salticidae) from South India. *J. Entomol. Zool. Stud.*, 2(5): 63–71.
- Caleb, J. T. D., Sanap, R. V., Patel, K. G., Sudhin, P. P., Nafin, K. S. & Sudhikumar, A. V. 2018. First description of the female of *Chrysilla volupe* (Karsch, 1879) (Araneae: Salticidae: Chrysillini) from India, with notes on the species' distribution and life history. *Arthropoda Sel.*, 27(2): 143–153.
- Kanesharatnam, N. & Benjamin, S. P. 2018. A new genus and three new species of jumping spiders (Araneae: Salticidae) from Sri Lanka. *Eur. J. Taxon.*, 444: 1–24.
- Karsch, F. 1879. Arachnologische Beiträge. *Zeitschrift für die Gesammten Naturwissenschaften*, 52: 534–562.
- Lessert R. 1927. Araignées du Congo (Première partie). *Rev. Suisse Zool.*, 34: 405–475.
- World Spider Catalog. 2019. World Spider Catalog. Natural History Museum Bern, online at <http://wsc.nmbe.ch>, version 20.5 (accessed 03 October 2019).
- Żabka, M. 1988. Salticidae (Araneae) of Oriental, Australian and Pacific regions, III. *Ann. Zool.*, Warszawa, 41: 421–479.

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